PIONEER
The Art of Entertainment

Service Manual

ORDER NO.
ARP2535

FM/AM DIGITAL SYNTHESIZER TUNER

F-201L HEX1K, HBX1K

F-201 HEWZX1K, HEWIX1K, SD, YPW

F – 201L AND F – 201 HAVE THE FOLLOWING :

Type	Model		Power Requirement	Remarks
	F – 201L	F – 201		
HEX1K	○	—	AC220 – 230V, 240V (switchable)*	
HBX1K	○	—	AC220 – 230V, 240V (switchable)*	
HEWZX1K	—	○	AC220 – 230V, 240V (switchable)*	
HEWIX1K	—	○	AC220 – 230V, 240V (switchable)*	
SD	—	○	AC110V, 120 – 127V, 220V, 240V (switchable)	
YPW	—	○	AC240V only	

* Change the connection of the power transformer's primary wiring.

● Refer to the service manual ARP2007 for F – 227/HEWZ.

- This manual is applicable to the following : F – 201L/HEX1K and HBX1K ; F – 201/HEWZX1K, HEWIX1K, SD and YPW.
- F – 201L covers MW/LW bands while F – 201 covers MW.
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

CONTENTS

1. CONTRAST OF MISCELLANEOUS PARTS ····· 2
2. SCHEMATIC AND PCB CONNECTIONS DIAGRAMS ····· 3
3. PCB PARTS LIST ····· 14
4. ADJUSTMENTS ····· 18
4. REGLAGES ····· 20
4. AJUSTES ····· 22

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway Markham, Ontario L3R 0P2 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

© PIONEER ELECTRONIC CORPORATION 1992

DFS MAY 1992 Printed in Japan

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

F – 201L/HEX1K, HBX1K, F – 201/HEWZX1K, HEWIX1K, SD, YPW and F – 227/HEWZ have the same construction except for the following :

Mark	Symbol & Description	Part No.							Remarks
		F – 227/ HEWZ	F – 201L/ HEX1K	F – 201L/ HBX1K	F – 201/ HEWZX1K	F – 201/ HEWIX1K	F – 201/ SD	F – 201 YPW	
◉	TUNER assembly	AWE1172	AWZ4139	AWZ4139	AWZ4133	AWZ4134	AWZ4136	AWZ4137	
◉	REMOCON assembly	.....	AWZ3864	AWZ3864	AWZ3864	AWZ3864	AWZ4140	AWZ4140	*1
◉	CONTROL assembly	AWP1029	AWP1040	AWP1040	AWP1040	AWP1040	AWP1029	AWP1029	*2
⚠	FU1 Fuse (T400mA/250V)	AEK – 407	AEK – 504	AEK – 504	AEK – 504	AEK – 504	AEK – 504	AEK – 504	
⚠	AC Power cord	ADG1012	ADG1049	ADG1087	ADG1012	ADG1012	ADG1051	ADG1050	
	Panel	AAK1925	AAK2164	AAK2164	AAK2164	AAK2164	AAK2164	AAK2164	
	FL filter	AAK1927	AAK1927	AAK1927	AAK1927	AAK1927	AAK1928	AAK1928	
	Screw (EARTH)	ABA1047	.....	.....	ABA1047	ABA1047	.....	.....	
	Front panel	AMB1618	AMB1996	AMB1996	AMB1995	AMB1995	AMB1995	AMB1995	
	Bonnet	ANE1231	ANE1364	ANE1364	ANE1364	ANE1364	ANE1357	ANE1236	
	Insulator assembly	AMR1434	.....	.....	.....	.....	.....	.....	
	Insulator assembly	AMR1435	.....	.....	.....	.....	.....	.....	
	Insulator assembly	.....	AMR2140	AMR2140	AMR2140	AMR2140	.....	.....	
	Leg assembly	.....	.....	.....	.....	.....	AEC1049	AEC1049	
NSP	Chassis	ANA1118	ANA1122	ANA1122	ANA1122	ANA1122	ANA1118	ANA1118	
NSP	Binder	.....	AEP – 215	AEP – 215	AEP – 215	AEP – 215	AEP – 215	AEP – 215	
NSP	Binder	.....	.....	AEC – 093	.....	.....	.....	.....	
	FM antenna assembly	ADH1002	.....	.....	ADH1002	ADH1002	.....	.....	
	FM antenna	.....	ADH1004	ADH1004	.....	.....	ADH1004	ADH1004	
	Connection cord with mini plug	.....	ADE – 085	ADE – 085	ADE – 085	ADE – 085	ADE – 085	ADE – 085	*3
	Styrol protector	AHA1333	AHA1350	AHA1350	AHA1350	AHA1350	AHA1333	AHA1333	*3
	Packing case	AHD1830	AHD2261	AHD2261	AHD2291	AHD2291	AHD2260	AHD2260	
	Packing sheet	AHG1017	AHG1107	AHG1107	AHG1107	AHG1107	AHG1017	AHG1017	
	Operating instructions (German)	ARC1202	.....	.....	ARC1342	.....	.....	.....	
	Operating instructions (English, French, German, Dutch, Swedish, Italian, Spanish, Portguese)	.....	ARE1235	.....	.....	.....	.....	.....	
	Operating instructions (English)	.....	.....	ARB1367	.....	.....	ARB1367	ARB1367	
	Operating instructions (Italian)	.....	.....	.....	.....	ARC1360	.....	.....	
	Operating instructions (Spanish)	.....	.....	.....	.....	.....	ARC1353	.....	

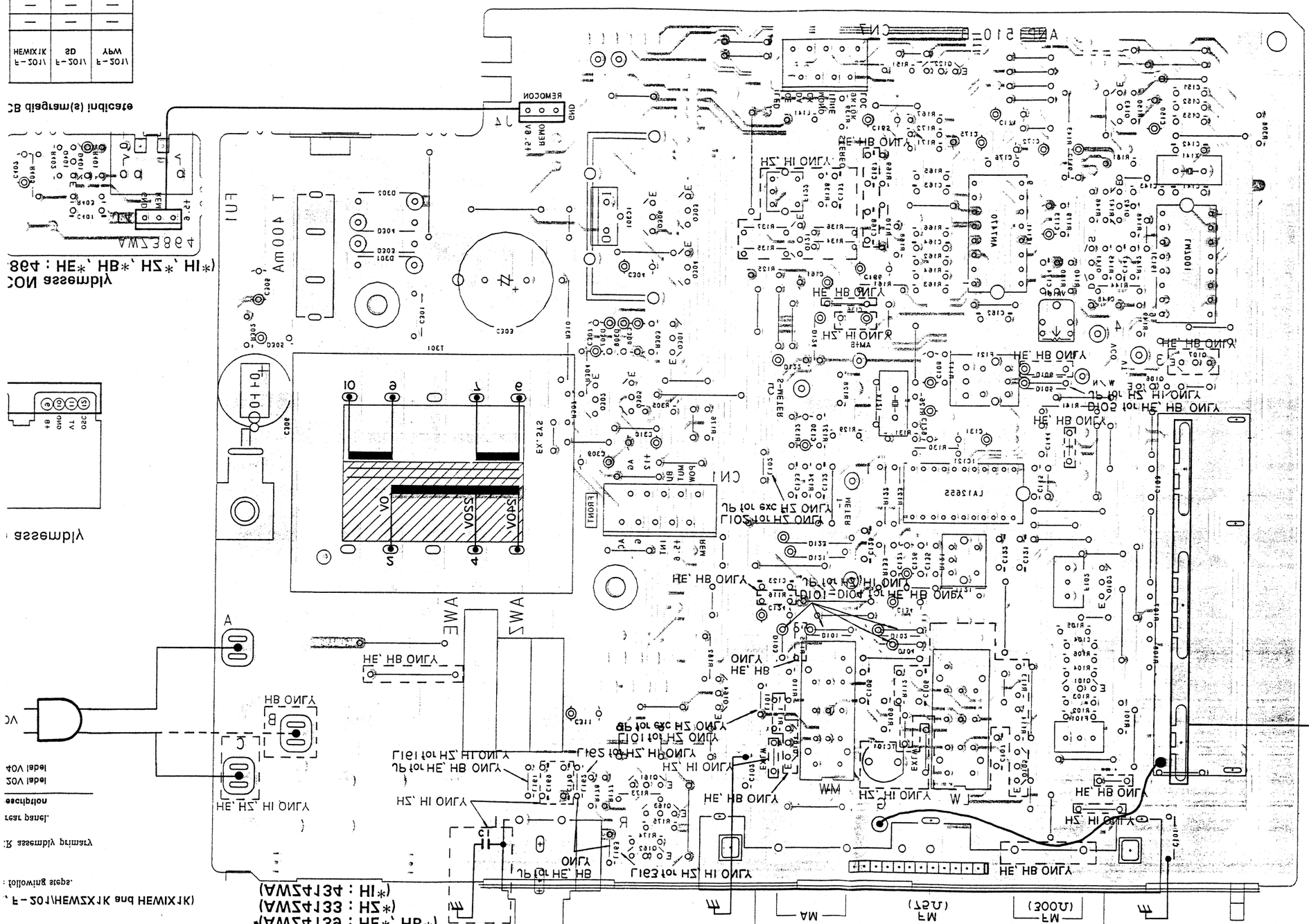
*NOTE : *1 Although REMOCON assembly (AWZ3864) and REMOCON assembly (AWZ4140) are different in part number, they have the same service parts.*

**2 Although CONTROL assembly (AWP1029) and CONTROL assembly (AWP1040) are different in part number, they have the same service parts.*

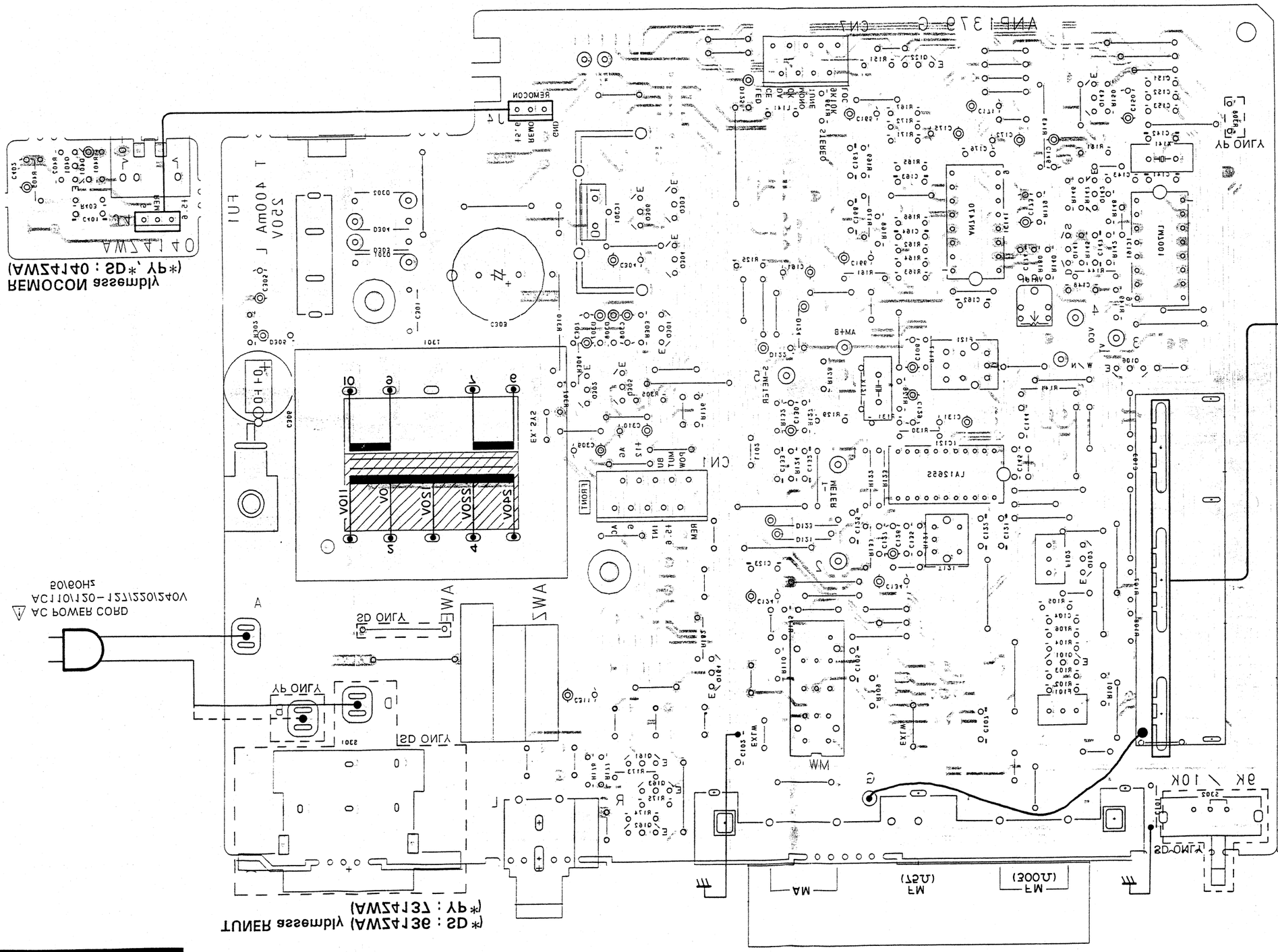
**3 For packing.*

2. SCHEMATIC AND PCB CONNECTIONS DIAGRAMS

This P. C. B. connection diagram is viewe

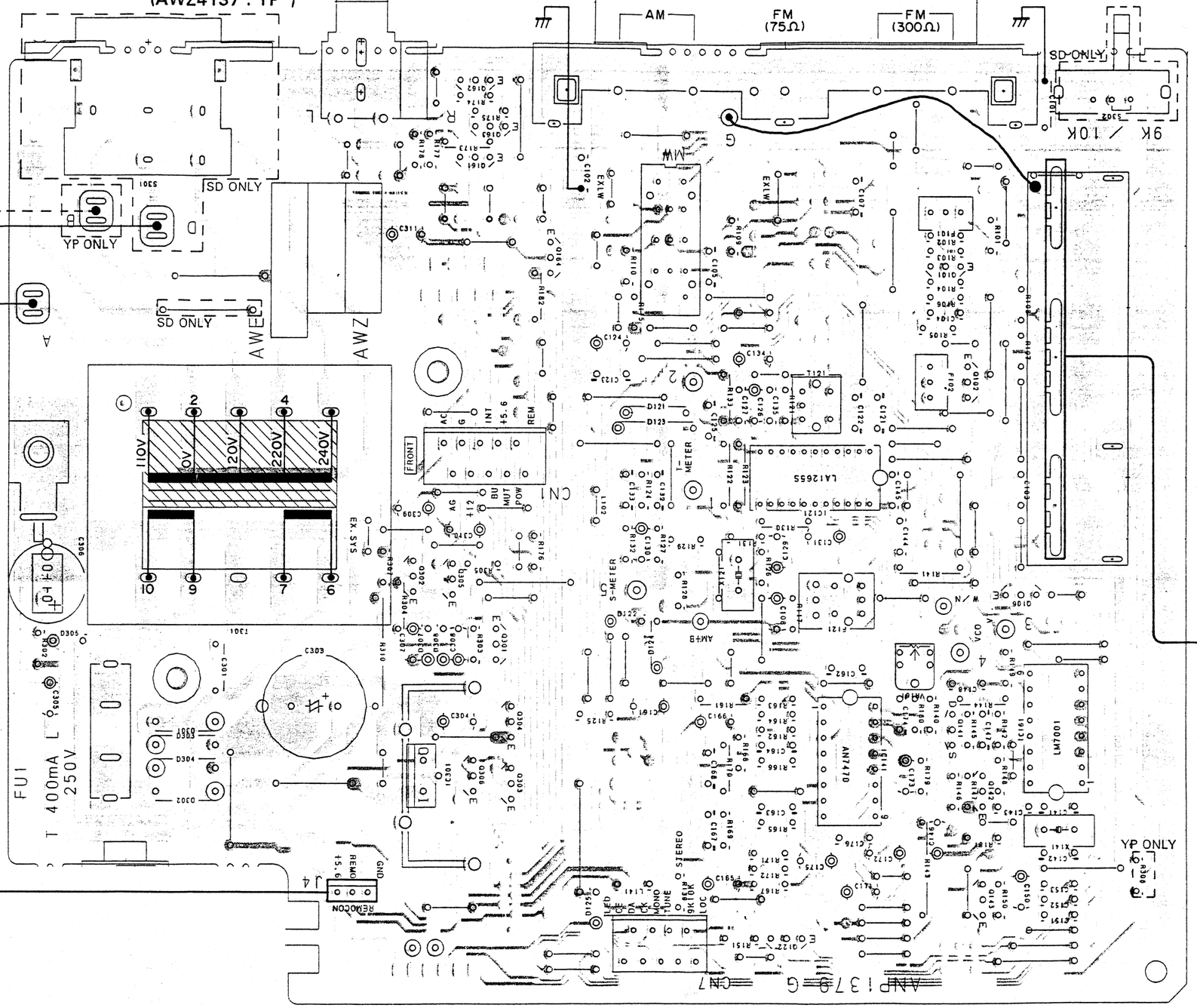

TUNER assemply
(*IH , *EH : 9E1A2WA)
(*ZH : 33E1A2WA)
(*IH : 4E1A2WA)
HE, HZ, HI ONLY
HZ, HI ONLY
HE, HB ONLY
HZ, HI ONLY
HE, HB ONLY
HE, HB ONLY
HE, HB

E-SOJ, E-SOF


TUNER assembly (AWZ4136 : *SD, AWZ4137 : *TV)
REMOCON assembly (AWZ4178 : *SD, *TV)
REMOCON assembly (AWZ4384 : *HI, *HZ, *HB, *HE)
3 Serial I.F. module assembly (E001DXA)
AC POWER CORD
AC110/120/220/240V
50/60Hz
AC POWER CORD
AC220-230/240V
50/60Hz
Line Voltage Selection
(For E-SOJ/HEXJK, HBXJK, E-SOJ/HEWZXJK and HEWIXJK)
Line voltage can be changed with the following steps.
1. Disconnect the AC power cord.
2. Remove the top cover.
3. Change the connection of TUNER assembly primary wire.
4. Check the line voltage label on the test barrel.
Part No. | Description
SET-XAA | VOSS label
SET-XAA | VOAS label
* Applies to the following :
* Applies in PCB diagram(s) indicate
— : Not applicable
○ : Applicable
E-SOJ/HEXJK, E-SOJ/HEWZXJK, E-SOJ/HEWIXJK, E-SOJ/HBXJK
SP, HP, HZ, HI, SD, TV, exc HZ
connection diagram is viewed from the foil side.

This P. C. B connection diagram is viewed from -

TUNER assembly (AWZ4136 : SD *)
(AWZ4137 : YP *)



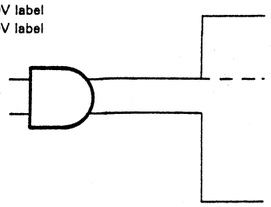
⚠ AC POWER CORD
AC110/120–127/220/240V
50/60Hz

Line Voltage Selection
(For F–201L/HEX1K, HBX1K, F–201/HEWZX1K and HEWIX1K)

Line voltage can be changed with the following steps.

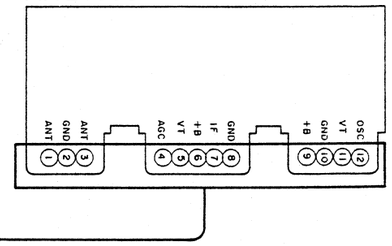
1. Disconnect the AC power cord.
2. Remove the top cover.
3. Change the connection of TUNER assembly primary pins.
4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX–193	220V label
AAX–192	240V label

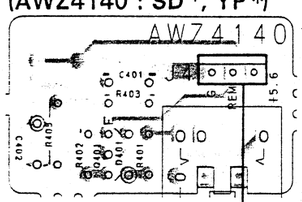


⚠ AC POWER CORD
AC220–230V/240V
50/60Hz

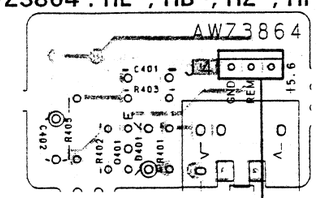
3 Serial F.E. module assembly
(AXQ1003)



REMOCON assembly
(AWZ4140 : SD *, YP *)



REMOCON assembly
(AWZ3864 : HE *, HB *, HZ *, HI



***Abbreviations in PCB diagram(s) indicate the following :**

	F–201L/ HEX1K F–201L/ HBX1K	F–201/ HEWZX1K	F–201/ HEWIX1K	F–201/ SD	F–201/ YPW
HE, HB	○	—	—	—	—
HZ	—	○	—	—	—
HI	—	—	○	—	—
SD	—	—	—	○	—
YP	—	—	—	—	○
exc HZ	○	—	○	○	○

○ : Applicable
— : Not applicable

VR161

Q161–Q163 Q164
Q302 Q305 Q301
IC301 Q306 Q303 Q304

Q101
IC121 Q102 Q106
Q122 IC141 Q141–Q143 IC161

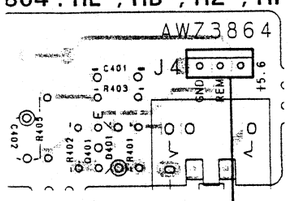
:ion diagram is viewed from the parts mounted side.

F – 201/HEWZX1K and HEWIX1K)
following steps.

R assembly primary
ear panel.
scription
20V label
40V label

assembly

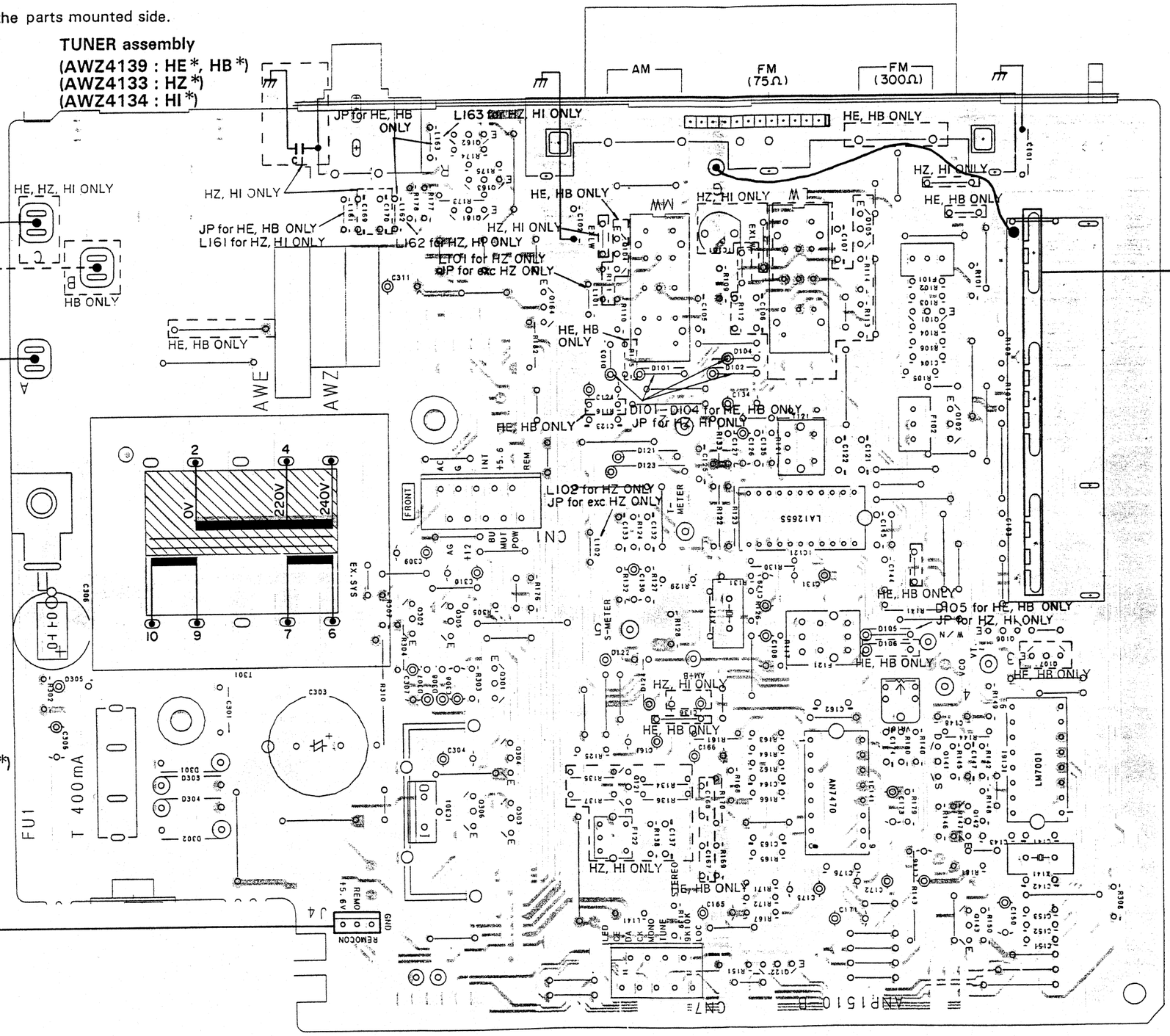
:ON assembly
864 : HE*, HB*, HZ*, HI*)



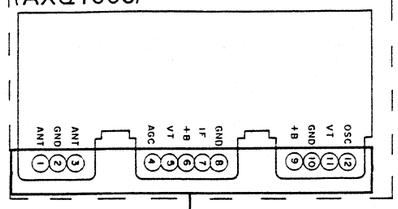
:B diagram(s) indicate

F – 201/ HEWIX1K	F – 201/ SD	F – 201/ YPW
—	—	—
—	—	—
○	—	—
—	○	—
—	—	○
○	○	○

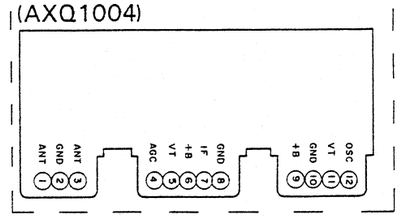
TUNER assembly
(AWZ4139 : HE*, HB*)
(AWZ4133 : HZ*)
(AWZ4134 : HI*)



HE*, HB* ONLY
3 Serial F.E. module assembly
(AXQ1003)



HZ*, HI* ONLY
4 Serial F.E. module assembly
(AXQ1004)



NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
0504		Transistor
0215		Radiator type transistor
0203	D203	Diode
R237	R237	Resistor
C513		Capacitor (Polarized)
C518		Capacitor (Non-polarized)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ⓞ(double circles) shows negative terminal.
4. The diode terminal marked with ⓞ(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

TUNER assembly (AWZ4139 : HE, HB)
(AWZ4133 : HZ)
(AWZ4134 : HI)
(AWZ4136 : SD)
(AWZ4137 : YP)

F.E. MODULE assembly
AXQ1003 : HE, HB, SD, YPW
AXQ1004 : HZ, HI

SD TYPE

AC POWER CORD
ADG1051
AC110/120–127/22
50/60Hz

TP5 S-METER

HZ, HI ONLY
HE, HB, SD, YP ONLY
FM 300ohm
FM 75ohm (PAL)
HE, HB, HZ, HI ONLY
AM
AXX1011 SD,YP
AXX1014 HZ,HI
AXX1012 HE,HB
TRACKING ADJ.
AKA1010 (HE,HB)
AKA1012 (HZ,HI)
AKA1009 (SD,YP)
TC101 : TRACKING ADJ.
HZ, HI, SD, YP ONLY
HE, HB ONLY
HE, HB, SD, YP ONLY
HZ, HI, SD, YP ONLY
HZ ONLY
exc HZ ONLY
L101 IHZ ONLY
exc HZ ONLY
F121 : TRACKING ADJ.
R128 : TUNED IND.
R129 : TUNED IND.
L121 : CENTER ADJ.
L102
exc SD ONLY
SD ONLY
VR161 : VCO ADJ.
HE, HB, SD, YP ONLY
Any diode without part number indicates 1SS252
TP3 VT
TP1 VREF T-METER
TP2 0V
CE DA CK MONO TUNE STEREO 9K/10K
KPE7 CN7
To CONTROL assembly J7

Abbreviations in schematic diagram(s) indicate the following :

	F-201L/HEX1K F-201L/HBX1K	F-201/HEWZX1K	F-201/HEWIX1K	F-201/SD	F-201/YPW
HE, HB	○	—	—	—	—
HZ	—	○	—	—	—
HI	—	—	○	—	—
SD	—	—	—	○	—
YP	—	—	—	—	○
exc HZ	○	—	○	○	○
exc SD	○	○	○	—	○

○ : Applicable
— : Not applicable

1. RESISTORS:
Indicated in Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
: DC voltage (V) at no input signal
Value in (') is DC voltage at rated power.
⇦ mA : DC current at no input signal
mV : Signal voltage at FM 1kHz ±75kHz DEV.

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts numbers.
▼ (RED) : Measurement point
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES (The underline indicates the switch position)
TUNER assembly
S302 (SD ONLY)
CHANNEL STEP 9k/10k

Line Voltage Selection
(For F-201L/HEX1K, HBX1K, F-201/HEWZX1K and HEWIX1K)

Line voltage can be changed with the following steps.
1. Disconnect the AC power cord.
2. Remove the top cover.
3. Change the connection of TUNER assembly primary pins.
4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX-193	220V label
AAX-192	240V label

AC POWER CORD
ADG1051
AC110/120-127/220/240V
50/60Hz

AC POWER CORD
ADG1049 : HE
ADG1087 : HB
ADG1012 : HZ, HI
AC220-230V/240V
50/60Hz
ADG1050 : YPW
AC240V/50Hz

REMOCON assembly
(AWZ3864 : HE, HB, HZ, HI)
(AWZ4140 : SD, YP)

FU1 : AEK-504
T400mA/250V

To CONTROL assembly J1

3. PCB PARTS LIST

3.1 FOR F-201L/HEX1K AND HBX1K

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 × 10¹ → 561 ..... RD1/8PM561J
47kΩ → 47 × 10³ → 473 ..... RD1/4PS473J
0.5Ω → 0R5 ..... RN2H0R5K
1Ω → 010 ..... RS1P010K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 × 10¹ → 5621 ..... RN1/4PC5621F

Mark	No.	Description	Parts No.
LIST OF ASSEMBLIES			
◉		REMOCON ASSEMBLY	AWZ3864
◉		TUNER ASSEMBLY	AWZ4139
◉		CONTROL ASSEMBLY	AWP1040
REMOCON ASSEMBLY			
SEMICONDUCTORS			
	Q401	TRANSISTOR	2SC1740S
	D401	DIODE	1SS252
CAPACITORS			
	C401	CERAMIC CAPACITOR	CKPUYB101K50
	C402	ELECT. CAPACITOR	CEAS330M35
RESISTORS			
		All resistors	RD1/8PM□□□J
OTHERS			
		JACK	AKN1006
TUNER ASSEMBLY			
SEMICONDUCTORS			
	IC121	AM/FM IC	LA1265S
	IC141	MPX IC	AN7470P
	IC161	PLL IC	LM7001
	IC301	REGULATOR IC	MC7812CT
	Q101	TRANSISTOR	2SC2668
	Q102	TRANSISTOR	XDA143ES
	Q104, 105	TRANSISTOR	XDC143ES
	Q106, 107	TRANSISTOR	XDA143ES
	Q122	TRANSISTOR	2SC1740S
	Q141	N-FET	2SK246
	Q142	TRANSISTOR	2SC1740SLN
	Q143	TRANSISTOR	2SC1740S
	Q161, 162	TRANSISTOR	2SC1740S
	Q163	TRANSISTOR	2SA933S
	Q164	TRANSISTOR	2SC1740S
	Q301	TRANSISTOR	2SC1845
	Q302	TRANSISTOR	XDC124ES
	Q303	TRANSISTOR	2SA1529
	Q304	TRANSISTOR	XDC143ES
	Q305	TRANSISTOR	2SC1740S
	Q306	TRANSISTOR	XDA143ES
	D101, 102	DIODE	1SS85
	D103-106	DIODE	1SS252
	D121-124	DIODE	1SS252
⚠	D301-304	DIODE	S5566
	D305	DIODE	1SS252
	D307	ZENER DIODE	RD6.2ESB2
	D308	DIODE	1SS252
COILS & TRANSFORMER			
	F101, 102	CERAMIC FILTER	ATF-119
	F121	CERAMIC FILTER	ATF-208
	L121	COIL	ATE-079
	L141	AXIAL INDUCTOR	LAU2R2M
⚠	T301	POWER TRANSFORMER	ATT1072
CAPACITORS			
	C101, 102	CERAMIC CAPACITOR	CKPUYB102K50
	C103, 104	CERAMIC CAPACITOR	CKPUYY103M16
	C105-107	CERAMIC CAPACITOR	CKDYF223Z50
	C108	ELECT. CAPACITOR	CEAS330M35
	C121, 122	CERAMIC CAPACITOR	CKDYF223Z50
	C123	CERAMIC CAPACITOR	CKPUYY103M16
	C124	ELECT. CAPACITOR	CEAS470M25
	C125	CERAMIC CAPACITOR	CKCYF103Z50
	C126	ELECT. CAPACITOR	CEAS010M50
	C127	CERAMIC CAPACITOR	CKPUYB331K50
	C129	ELECT. CAPACITOR	CEAS100M50
	C130	ELECT. CAPACITOR	CEAS2R2M50
	C131	ELECT. CAPACITOR	CEAS4R7M50
	C132	CERAMIC CAPACITOR	CKCYF222Z50
	C133	CERAMIC CAPACITOR	CKDYF473Z50
	C134	ELECT. CAPACITOR	CEAS330M35
	C135	CERAMIC CAPACITOR	CKPUYY103M16
	C141, 142	CERAMIC CAPACITOR	CCMCH150J50
	C143, 144	CERAMIC CAPACITOR	CKPUYY103M16
	C145	AXIAL CAPACITOR	CCPUSL470J50
	C146	ELECT. CAPACITOR	CEAS330M35
	C147	AUDIO FILM CAPACITOR	CFTXA224J50
	C148	CERAMIC CAPACITOR	CKPUYY103M16
	C150	ELECT. CAPACITOR	CEAS101M25
	C151-153	AXIAL CAPACITOR	CCPUSL470J50
	C161	ELECT. CAPACITOR	CEANP4R7M50
	C162	CERAMIC CAPACITOR	CKDYF473Z50
	C163	MYLAR FILM CAPACITOR	CQMA102J50
	C164	MYLAR FILM CAPACITOR	CQMA102J50
	C165, 166	ELECT. CAPACITOR	CEAS4R7M50
	C167, 168	CERAMIC CAPACITOR	CKCYB562K50
	C171	ELECT. CAPACITOR	CEASR22M50
	C172	ELECT. CAPACITOR	CEAS1R5M50
	C173	ELECT. CAPACITOR	CEAS3R3M50
	C174	CAPACITOR	ACE1039
	C175	ELECT. CAPACITOR	CEAS470M25
	C176	CERAMIC CAPACITOR	CKPUYY103M16
⚠	C301	CAPACITOR	CQMXA104J100
	C303	ELECT. CAPACITOR	CEAS222M35
	C304	ELECT. CAPACITOR	CEAS101M25
	C305	ELECT. CAPACITOR	CEAS470M25
	C306	CAPACITOR	ACH1135
	C307, 308	ELECT. CAPACITOR	CEAS470M25
	C309, 310	ELECT. CAPACITOR	CEAS010M50
	C311	ELECT. CAPACITOR	CEAS330M35
RESISTORS			
	VR161	VR (4.7kΩ)	ACP1042
	R310	CARBON FILM RESISTOR	RD1/4PM2R2J
		Other resistors	RD1/8PM□□□J
OTHERS			
	CN1	CONNECTOR (10P)	KPE10
	CN7	CONNECTOR (7P)	KPE7
	X121	CERAMIC RESONATOR (450kHz)	ATF1027
	X141	CRYSTAL RESONATOR (7.2MHz)	ASS1042
		SCREW	ABA1012
		ANTENNA TERMINAL 4-P WITH PAL	AKA1010
		PIN JACK (2P)	AKB1039
		AM RF TUNING BLOCK	AXX1012
		AM RF TUNING BLOCK	AXX1013
		3 SERIAL F.E. MODULE ASSEMBLY	AXQ1003

NOTE :

3. Serial F.E. module assembly has no service parts.

CONTROL ASSEMBLY

Although CONTROL assembly (AWP1029) and CONTROL assembly (AWP1040) are different in part number, they have the same service parts.

3.2 FOR F-

NOTES:

- *Parts marked*
- *The ⚠ mark f be sure to use*
- *Parts marked*

TUNER ASS

TUNER asse have the san

Mark	
	Q104,
	Q107
	Q121
	D101,
	D103-
	S301
	S302
	F102
	F122
	L101,
	L161,
	L163
⚠	T301
	TC101
	C1
	C105
	C106
	C136
	C137
	C161
	C163,
	C167,
	C169,
	R109
	R111,
	R112
	R113
	R115

3.2 FOR F-201/HEWZX1K, HEWIX1K, SD AND YPW

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

TUNER ASSEMBLY

TUNER assembly (AWZ4133, AWZ4134, AWZ4136, AWZ4137) and TUNER assembly (AWZ4139) have the same construction except for the following :

Mark	Symbol & Description	Part No. AWZ4139	AWZ4133	AWZ4134	AWZ4136	AWZ4137	Remarks
	Q104, Q105	XDC143ES	.....	.....	.....	.....	
	Q107	XDA143ES	.....	.....	.....	.....	
	Q121	.....	2SC1740S	2SC1740S	.....	.....	
	D101, D102	1SS85	.....	.....	.....	.....	
	D103-D106	1SS252	.....	.....	.....	.....	
	S301 Voltage selector (AC110V/120-127V/220V/240V)	.....	.....	.....	AKX-505	.....	
	S302 9k/10k selector	.....	.....	.....	ASH1015	.....	
	F102	ATF-119	ATF-119	ATF-119	ATF-107	ATF-107	
	F122	.....	ATF-146	ATF-146	.....	.....	
	L101, L102	.....	LAU470K	.....	.....	.....	
	L161, L162	.....	LAU221K	LAU221K	.....	.....	
	L163	.....	LAU010M	LAU010M	.....	.....	
⚠	T301	ATT1072	ATT1072	ATT1072	ATT1073	ATT1072	
	TC101	.....	ACM-018	ACM-018	.....	.....	
	C1	.....	CKDYF103Z50	CKDYF103Z50	.....	.....	
	C105	CKDYF223Z50	CKDYF473Z50	CKDYF473Z50	CKDYF223Z50	CKDYF223Z50	
	C106	CKDYF223Z50	.....	.....	.....	.....	
	C136	.....	CEAS100M50	CEAS100M50	.....	.....	
	C137	.....	CKCYB681K50	CKCYB681K50	.....	.....	
	C161	CEANP4R7M50	CEAS100M50	CEAS100M50	CEANP4R7M50	CEANP4R7M50	
	C163, C164	CQMA102J50	CQMA102J50	CQMA102J50	CQMA122J50	CQMA102J50	
	C167, C168	CKCYB562K50	.....	.....	CKCYB562K50	CKCYB562K50	
	C169, C170	.....	CKDYB332K50	CKDYB392K50	.....	.....	
	R109	RD1/8PM103J	RD1/8PM472J	RD1/8PM472J	RD1/8PM103J	RD1/8PM103J	
	R111, R114, R116	RD1/8PM681J	.....	.....	.....	.....	
	R112	RD1/8PM102J	.....	.....	.....	.....	
	R113	RD1/8PM104J	.....	.....	.....	.....	
	R115	RD1/8PM103J	.....	.....	.....	.....	

Mark	Symbol & Description	Part No. AWZ4139	AWZ4133	AWZ4134	AWZ4136	AWZ4137	Remarks
	R134	.....	RD1/8PM224J	RD1/8PM224J	.....	.....	
	R135	.....	RD1/8PM473J	RD1/8PM473J	.....	.....	
	R136, R138	.....	RD1/8PM472J	RD1/8PM472J	.....	.....	
	R137	.....	RD1/8PM222J	RD1/8PM222J	.....	.....	
	R162	RD1/8PM823J	RD1/8PM683J	RD1/8PM683J	RD1/8PM823J	RD1/8PM823J	
	R169, R170	RD1/8PM332J	RD1/8PM822J	RD1/8PM332J	RD1/8PM332J	RD1/8PM332J	
	R308	RD1/8PM102J	RD1/8PM102J	RD1/8PM102J	.....	RD1/8PM102J	
	Antenna terminal 4P with PAL	AKA1010	.....	.....	.....	.....	
	Antenna terminal 2P with PAL	.....	AKA1012	AKA1012	.....	.....	
	Antenna terminal 4P	.....	.....	.....	AKA1009	AKA1009	
	3 Serial F.E. module assembly	AXQ1003	.....	.....	AXQ1003	AXQ1003	*1
	4 Serial F.E. module assembly	.....	AXQ1004	AXQ1004	.....	.....	*1
	AM RF Tuning block	AXX1012	AXX1014	AXX1014	AXX1011	AXX1011	
	AM RF Tuning block	AXX1013	.....	.....	.....	.....	

**1 All of these assemblies has no service parts.*

REMOCON ASSEMBLY

Although REMOCON assembly (AWZ3864) and REMOCON assembly (AWZ4140) are different in part number, they have the same service parts.

4. ADJUSTMENTS

4.1 ADJUSTMENT OF THE FM TUNER SECTION

- Set the mode selector to FM BAND.
- Connect the wiring as shown in the Fig. 4-1.

Step No.	Adjustment title	FM SG (1kHz±75kHz dev.)		Reception frequency display	Adjustment location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center adjustment *1	98.0	60	98.0MHz	L121	Adjust so that the voltage between the TP-1 and TP-2 becomes 0V ±50mV.
2	VCO adjustment	Non-modulation	60	98.0MHz	VR161	Adjust so that the output of the TP-4 becomes 76kHz ±0.5kHz.
3	TUNED IND. Lighting level	98.0 *2 (Stereo modulation)	—	98.0MHz	R129	The R129 of the TUNER assembly has been mounted or removed at the time of adjustment in the production. Mount or remove R129 referring to the table below, and adjust it so that the indicator of TUNED starts to light up at 24dBμV (±15dB).

Input level	R129
The indicator of TUNED starts lighting up at a larger input than 24dBμV (±15dB).	Remove
The indicator of TUNED starts lighting up at less input than 24dBμV (±15dB).	Mount

**1 : When FE module assembly has been replaced, make sure to adjust the center adjustment.*
**2 Stereo modulation : Main 1kHz L+R ±68.25kHz dev.*
Pilot 19kHz ±6.75kHz dev.

4.2 ADJUSTMENT OF THE MW TUNER SECTION

- Set the mode selector to MW BAND.
- Connect the wiring as shown in the Fig. 4-2.
- The values in ( ) are values of 10kHz steps.

Step No.	Adjustment title	AM SG (400Hz 30% Mod.)		Reception frequency display	Adjustment location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	Tracking adjustment *1	603	Weak input	603kHz	MW ANT. coil (AXX1014)	Adjust so that the voltage between the TP-5 and GND becomes maximum.
2		1395		1395kHz	TC101	
3	IF adjustment *1	603		603kHz	F121	
4	TUNED IND. lighting level	999 (1000)	—	999kHz (1000kHz)	R128	The R128 of the TUNER assembly has been mounted or removed at the time of adjustment in the production. Mount or remove R128 referring to the table below, and adjust it so that the indicator of TUNED starts to light up at 65dBμV/m.

Input level	R128
The indicator of TUNED starts lighting up at a larger input than 65dBμV/m.	Remove
The indicator of TUNED starts lighting up at less input than 65dBμV/m.	Mount

**1 : F-201/HEWZX1K and HEWIX1K only*

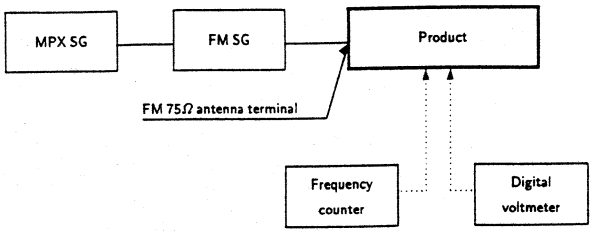


Fig. 4-1 FM Adjustment Connection Diagram

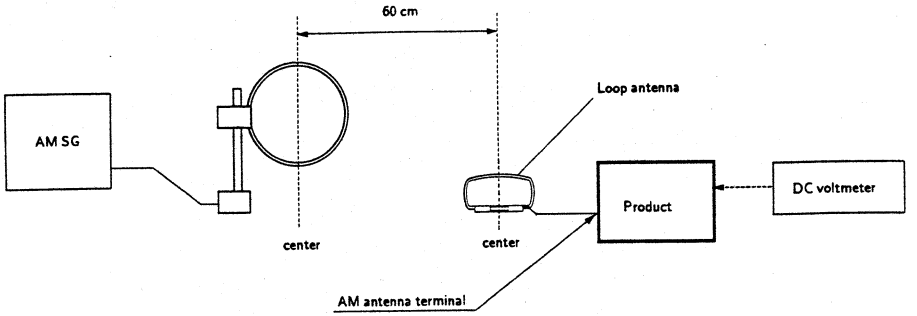


Fig. 4-2 MW Adjustment Connection Diagram

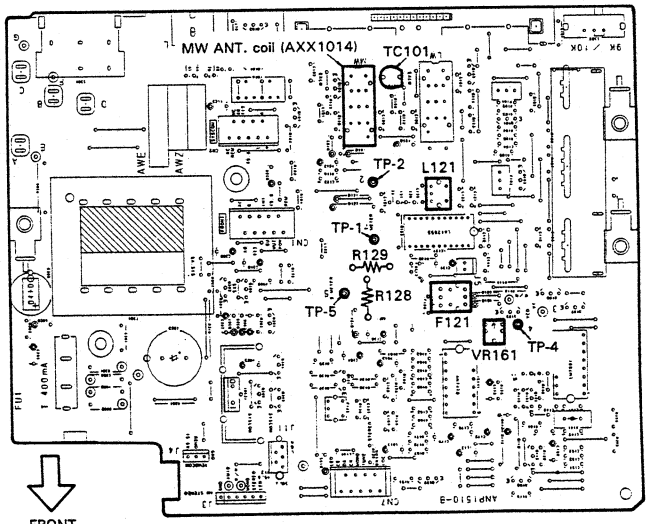


Fig. 4-3 Adjustment Points

4. REGLAGES

4.1 REGLAGE DU TUNER FM

- Régler le sélecteur de mode sur la position FM BAND.
- Connecter le câblage comme indiqué sur la Fig. 4−1.

Etape No.	Items de réglage	FM SG (1kHz±75kHz dev.) Fréquence (MHz)	FM SG (1kHz±75kHz dev.) Niveau (dBμV)	Affichage de fréquence de reception	Liea de réglage	Caractéristiques
1	Réglage Centre *1	98,0	60	98,0MHz	L121	Régler de sorte que la tension entre TP−1 et TP−2 devienne 0V ±50mV.
2	Réglage VCO	Non-modulation	60	98,0MHz	VR161	Régler de sorte que la sortie de TP−4 devienne 76kHz ±0,5kHz.
3	TUNED IND. Niveau d'éclairement	98,0 *2 (Modulation stéréo)	—	98,0MHz	R129	Le R129 de l'assemblage du tuner a été monté ou retiré au moment du réglage pendant la production. Monter ou retirer le R129 d'après le tableau ci-dessous, et le régler de manière que les indicateurs de TUNED commencent à s'allumer à 24dBμV (±15dB).

Niveau d'entrée	R129
Les indicateurs de TUNED commencent à s'allumer pour une entrée supérieure à 24dBμV (±15dB).	Retirer
Les indicateurs de TUNED commencent à s'allumer pour une entrée inférieure à 24dBμV (±15dB).	Monter

1 : Lorsqu'un ensemble module FE a été remplacé, toujours ajuster le réglage centre.
2 Modulation stéréo : Principal 1kHz L+R ±68,25kHz dév.
Pilote 19kHz ±6,75kHz dev.

4.2 REGLAGE DU TUNER PO (MW)

- Régler le sélecteur de mode sur la position MW BAND.
- Connecter le câblage comme indiqué sur la Fig. 4−2.
- Les Valeurs entre parenthèses correspondent à des incréments de 10kHz.

Etape No.	Items de réglage	AM SG (400Hz 30% mod.) Fréquence (kHz)	AM SG (400Hz 30% mod.) Niveau (dBμV/m)	Affichage de fréquence de reception	Liea de réglage	Caractéristiques
1	Reglage d'alignement *1	603	Entrée faible	603kHz	Bobine MW ANT. (AXX1014)	Régler de sorte que la tension entre TP−5 et la mise à la terre devienne maximum.
2		1395		1395kHz	TC101	
3	Reglage IF *1	603		603kHz	F121	
4	TUNED IND. Niveau d'éclairement	999 (1000)	—	999kHz (1000kHz)	R128	Le R128 de l'assemblage du tuner a été monté ou rentiré au moment du réglage pendant la production. Monter ou retirer le R128 d'après le tableau ci-dessous, et le régler de manière que les indicateurs de TUNED commencent à s'allumer à 65dBμV/m.

Niveau d'entrée	R128
Les indicateurs de TUNED commencent à s'allumer pour une entrée supérieure à 65dBμV/m.	Retirer
Les indicateurs de TUNED commencent à s'allumer pour une entrée inférieure à 65dBμV/m.	Monter

1 : F−201/HEWZX1K et HEWIX1K seulement

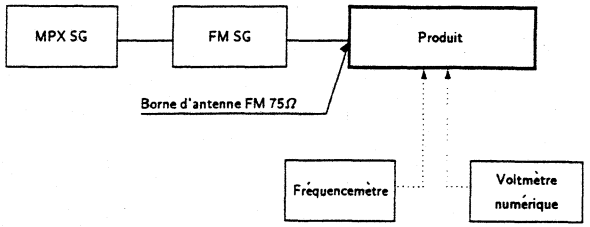


Fig. 4−1 Schéma de connexion de réglage FM

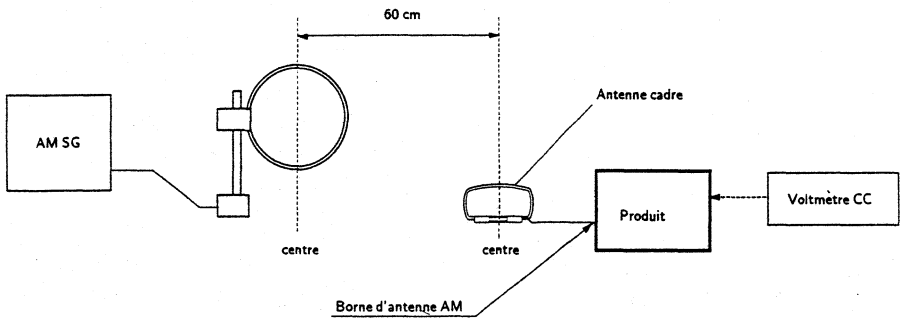


Fig. 4−2 Schéma de raccordement de réglage MW

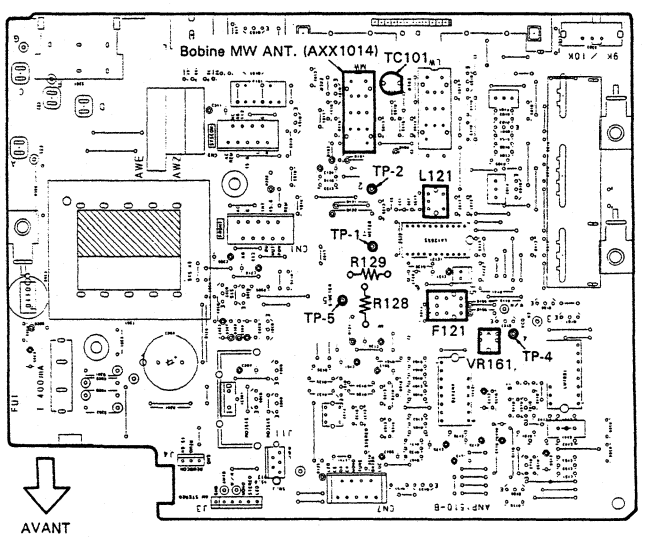


Fig. 4−3 Emplacements de réglage

4. AJUSTES

4.1 AJUSTE DEL SINTONIZADOR DE FM

- Ajustar el selector de modo a FM BAND.
- Conectar el conexionado de la manera observada en la Fig. 4−1.

N° de paso	Items de ajuste	FM SG (1kHz±75kHz dev.)		Fresuenci-metro de recepción	Lugar de ajuste	Especificaciones
		Frecuencia (MHz)	Nivel (dBμV)			
1	Ajuste de Central *1	98,0	60	98,0MHz	L121	Ajustar de manera que la tensión entre TP−1 y TP−2 que de en 0V ±50mV.
2	Ajuste de VCO	Sin-modulación	60	98,0MHz	VR161	Ajustar de manera que la salida de TP−4 sea de 76kHz ±0,5kHz.
3	Nivel de iluminacion de TUNED IND.	98,0 *2 (Modulación estéreo)	—	98,0MHz	R129	El R129 del conjunto TUNER ha sido montado o extraído en el momento del ajuste en la fábrica. Monte el R129 consultando la tabla siguiente, y ajústelo de forma que los indicadores de TUNED comiencen a encenderase a 24dBμV (±15dB).

Nivel de entrada	R129
Los indicadores de TUNED comienzan a encenderse a una entrada mayor de 24dBμV (±15dB).	Extraiga.
Los indicadores de TUNED comienzan a encenderse a una entrada inferior de 24dBμV (±15dB).	Monte.

1 : Cuando se haya reemplazado un conj. de módulo FE, asegurarse de ajustar el ajuste central.
2 Modulación stéréo : Principal 1kHz L+R ±68,25kHz dév.
Pilote 19kHz ±6,75kHz dev.

4.2 AJUSTE DEL SINTONIZADOR DE MW

- Ajustar el selector de modo a MW BAND.
- Conectar el conexionado de la manera observada en la Fig. 4−2.
- Los valores entre parétesis ( ) son los de pasos de 10kHz.

N° de paso	Items de ajuste	AM SG (400Hz 30% mod.)		Fresuenci-metro de recepción	Lugar de ajuste	Especificaciones
		Frecuencia (kHz)	Nivel (dBμV/m)			
1	Ajuste de seguimiento *1	603	Entrada débil	603kHz	Bobina MW ANT. (AXX1014)	Ajustar de manera que la tensión entre TP−5 y tierra sea máxima.
2		1395		1395kHz	TC101	
3	Ajuste de IF *1	603		603kHz	F121	
4	Nivel de iluminacion de TUNED IND.	999 (1000)	—	999kHz (1000kHz)	R128	El R128 del conjunto TUNER ha sido montado o extraído en el momento del ajuste en la fábrica. Monte el R128 consultando la tabla siguiente, y ajústelo de forma que los indicadores de TUNED comiencen a encenderase a 65dBμV/m.

Nivel de entrada	R128
Los indicadores de TUNED comienzan a encenderse a una entrada mayor de 65dBμV/m.	Extraiga.
Los indicadores de TUNED comienzan a encenderse a una entrada inferior de 65dBμV/m.	Monte.

1 : Solo F−201/HEWZX1K y HEWIX1K

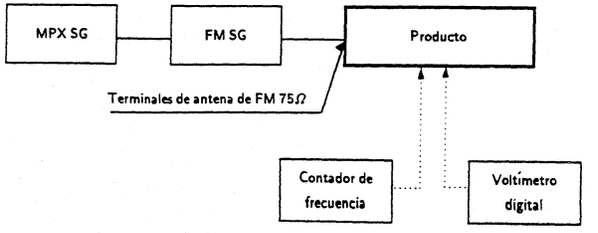


Fig. 4−1 Diagrama de conexiones para el ajuste de FM

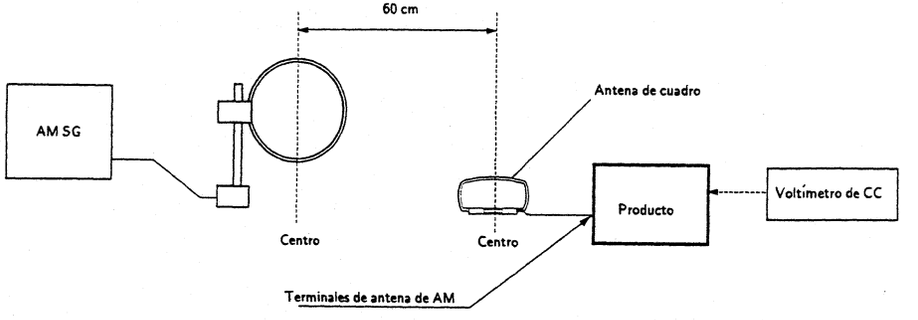


Fig. 4−2 Diagrama de conexiones para el ajuste de MW

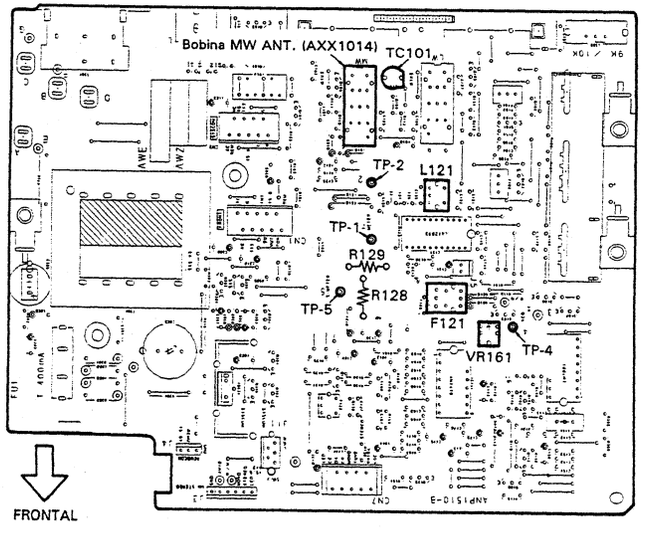


Fig. 4−3 Puntos de ajuste